COMPOSITAE OF THE GUAYANA HIGHLAND-VIII

Dasyphyllum vepreculatum (D. Don) Cabr. (Barnadesioideae: Barnadesieae), New for Guayana

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Abstract

Dasyphyllum vepreculatum is documented in Bolívar, Venezuela, marking the first report of the species, genus, tribe Barnadesieae, and subfamily Barnadesioideae in Guayana. Twelve tribes in the three subfamilies of Compositae are now known from Guayana.

Introduction

Dasyphyllum H.B.K. (Compositae: Barnadesioideae: Barnadesieae) is a striking, principally Andean and Planaltine genus of about 39 species of trees, shrubs, or vines. Species of the genus are often armed with nodal spines and are characterized by alternate trinerved chartaceous to subcoriaceous leaves, by generally epaleate capitula of bisexual florets with tubular actinomorphic or somewhat bilabiate (inconspicuously zygomorphic) corollas that are partly villose, by shortly caudate anthers that lack an apical appendage, by shortly bilobed smooth styles with a continuous stigmatic surface, and by obconic, generally villous achenes with many persistent plumose pappus setae.

The present report documents a range extension of *D. vepreculatum* (D. Don) Cabr. into Edo. Bolívar, Venezuela, marking the first report of the genus and species in Guayana, and westward into Edos. Falcón and Lara. Neither the species nor the genus is known to occur in the Guayana region of Brazil, Colombia, or Guyana (Pruski 1991) or in the Guianas (Funk et al. 1992). The species is the only Venezuelan member of the genus (Aristeguieta 1964) and of tribe Barnadesieae. Previously, *D. vepreculatum* was known in Venezuela only from Anzoátegui (Steyermark 1957, p. 1145), Aragua, Distrito Federal, and Miranda (Aristeguieta 1964), where it was reported as a species of *Chuquiraga* Juss., and in Brazil from Bahia (Cabrera 1959).

Dasyphyllum has been placed in subtribe Barnadesiinae, tribe Mutisieae (Cabrera 1977) of the Cichorioideae and is the sole genus of the subtribe found in Guayana. Largely because of axillary spines and barnadesioid trichomes and because of cpDNA differences between Barnadesiinae and all the other Compositae for which cpDNA sequences are known, the subtribe has recently been elevated (Bremer and Jansen 1992) to the tribal level as the Barnadesieae. Moreover, the tribe has been placed by Bremer and Jansen (1992) into a newly described (third) subfamily (Barnadesioideae) of the Compositae. Consequent to this elevation in rank of subtribe Barnadesiinae, this report of *D. vepreculatum* in Guayana not only notes a species and genus new to Guayana, but therefore also a tribe and subfamily new for its flora. In the treatment of the Compositae by the first author in the forthcoming "Flora of the Venezuelan Guayana" by Julian Steyermark and collaborators, eleven additional tribes in the two larger subfamilies [Lactuceae, Mutisieae, and Vernonieae (Cichorioideae) and Astereae, Coreopsideae, Eupatorieae, Gnaphalieae, Heliantheae, Plucheae, Senecioneae, and Tageteae (Asteroideae)] are also listed as native to Guayana.

Taxonomic Treatment

Dasyphyllum vepreculatum (D. Don) Cabr., Rev. Mus. La Plata n.s. 9: 62. 1959. *Chuquiraga vepreculata* D. Don, Trans. Linn. Soc. 16: 290. 1830. *Flotovia vepreculata* (D. Don) DC., Prodr. 7: 11. 1838. -Type: VENEZUELA [Distrito Federal]: ad Caracas, ca. 1828, D. Fanning s.n. [holotype: Lambert Herbarium n.v., possibly in BM, CGE, G, LE, or OXF fide Miller 1970].

Climbing vines to 8 m long; stems much-branched, subterete, densely pubescent when young, later glabrate, commonly armed with pairs of curved, downward pointing nodal spines, these 2—6 mm long; upper internodes to 4 cm long, shorter than the subtending leaves. Leaves simple, alternate, petiolate, evenly distributed along upper stem branches; blade chartaceous or subcoriaceous, elliptic-lanceolate to broadly elliptic, 2.5—9 x 1—3.9 cm, acute to rounded at base, apically acute to acuminate and mucronulate, the margins entire, often revolute, the venation reticulately 3-veined from near base, upper blade surface subnitidous, glabrous or weakly villose with repent hairs, lower blade surface villose to weakly so or nearly glabrous; petiole non-clasping, 3—6 mm long, villosulous. Capitulescence terminal or also lateral from uppermost nodes, corymbiform, lateral corymbs of up to 12 capitula, terminal corymbs often with more than twice this number of capitula. Capitula homogamous and isomorphic, 14—24-flowered, short-pedunculate; involucre campanulate, 8—12 x 4—7 mm, 6—7-seriate; phyllaries many, imbricate, strongly graduated, erect or inner series spreading or reflexed, rigidly coriaceous, sericeous or at least so near margins, entire, the outer phyllaries triangular to ca. 2 mm long, the apex attenuate, terminating in a strong spinule to 1.5 mm long, grading to inner series of linear-lanceolate phyllaries to ca. 8 mm long, these with merely mucronate apices; receptacle flat, hirsute, naked or outer portions partly paleate. Florets bisexual; corollas inconspicuously zygomorphic, tubular, ca. 8 mm long, pilose, cream-colored, corolla limb 5 mm long, 5-lobed, with one lobe bordered by much more deeply cut sinuses than the others, apex of lobes pilose, the proximal portion of the lobes less pilose to nearly glabrous, the 4 shorter lobes ca. 2 mm long, longer lobe ca. 5 mm long, all lobes equal on top, erect or slightly reflexed at apex; corolla tube ca. 3 mm long, pilose; anthers slightly exserted from above the tips of the corolla lobes, ca. 4 mm long, cream-colored, caudate (with sterile tails), the tails ca. 0.5—0.7 mm long, glabrous, those of adjacent thecae connate; style glabrous, shortly bilobed, the branches slightly broader than the shaft, acute at apex. Achenes obconic, to 1.5 mm long, densely long-pilose, the hairs often more than twice the achene body length and obscuring achene surface; pappus of many persistent, obviously plumose cream-colored setae ca. 8 mm long, as long as the corolla.

Additional collections: **BRAZIL**. **Bahia**: Cruz das Almas, Feb 1957, Pinto 56—66 (IAL n.v., LP n.v., cited by Cabrera 1959). **VENEZUELA**. **Anzoátegui**: dryish forested slopes, Cerro La Danta, bordering tributary of Río León, northeast of Bergantín, 800—1100 m, 22 Feb 1945, Steyermark 61092 (F n.v., NY); forested rocky slopes along Río Querecual, southwest of Bergantín, 500 m, 14 Mar 1945, Steyermark 61489 (F n.v., NY, US). **Aragua**: prope coloniam Tovar, 20 Jun 1855, Fendler 639 (NY, P n.v., US). **Bolívar**: Mun. Piar, bosques medios semideciduos en lomerío, isla en el lago de Guri (Sector Danto Manchado), 20 km al S de la Presa R. Leoni, aprox. 735’N, 6258’W, 270 m, 6—9 Feb 1990, Aymard et al. 7778 (NY, PORT); Mun. Piar, isla en el lago de Guri (Sector Danto Manchado), bosques medios tropófitos en lomerío, 40 km al S de la Presa R. Leoni, aprox. 735’N, 6258’W, 270 m, 24 Feb 1992, Aymard et al. 10166 (NY, PORT); Mun. R. Leoni, Cerro Cachimbo, 36 km al E de La Paragua, 652’N, 6303’W, 320 m, Mar 1987, W. Fernández 4073 (PORT). **Falcón**: Dtto. Buchivacoa, Rio Agua

Viva, 17 km de Dabajuro, 11 Nov 1978, L. Cárdenas et al. 2713 (MY, VEN). **Lara**: alrededores de Duaca, 26 Mar 1950, A. Fernández 104 (MY). **Miranda**: climber on bushes in scrub, between Sabana Grande and Baruta, 1000 m, 8 Dec 1938, Ll. Williams & Alston 243 (F n.v., NY, S n.v., US); trepadora sobre arbustos en matorrales, entre Sabana Grande y Baruta, 1000 m, s.d., Ll. Williams 10847 (US).

Distribution and Ecology

Plants of this species are low vines climbing over dry scrub or semideciduous forest in Bahia, Brazil and Anzoátegui, Aragua, Bolívar, Distrito Federal, Falcón, Lara, and Miranda, Venezuela (Fig. 1). This species is known to occur from 270 to 1100 meters in elevation and to flower in February, March, June, November, and December.

In Guayana this species is known only from low elevations (270—320 meters) near Lake Guri where it is found on steep hillsides of shallow recent azonal soils (entisols) and highly weathered ferruginous soils (ultisols) with gneiss rocks. The vertical structure of the forest in Guayana where *Dasyphyllum vepreculatum* occurs shows three well differentiated strata of trees and the floristic composition of the forest includes a number of Caribbean elements more commonly encountered in Venezuela in forests north of the Orinoco River. The upper stratum is composed of emergent species from 20—30 m in height and the more frequently encountered species are in the genera *Brosimum*, *Ceiba*, *Centrolobium*, *Eschweilera*, *Licania*, *Melicoccus*, *Myrospermum*, *Pradosia*, *Pseudanamomis*, and *Tabernaemontana*. The canopy and understory are composed of trees between 6—20 m in height and the more common elements include species of *Albizia*, *Allophylus*, *Alseis*, *Aspidosperma*, *Astrocaryum*, *Brosimum*, *Bunchosia*, *Casearia*, *Centrolobium*, *Clavija*, *Coccoloba*, *Cordia*, *Guarea*, *Guatteria*, *Guazuma*, *Guettarda*, *Gustavia*, *Hymenaea*, *Lecointea*, *Lepidocordia*, *Maclura*, *Margaritaria*, *Phyllanthus*, *Pterocarpus*, *Rollinia*, *Sapindus*, *Spondias*, *Vitex*, and *Zanthoxylum*. The forest floor is dense and composed of shrubs, subshrubs, and herbs of the genera *Abutilon*, *Adiantum*, *Bactris*, *Chamissoa*, *Coursetia*, *Ertela*, *Olyra*, *Pharus*, *Piper*, *Psychotria*, *Rinorea*, *Rivina*, and *Zapoteca*. A full account of the forests of these islands in Lake Guri has been prepared by the second author for publication in Biollania.

Acknowledgements

We thank Jose Cuatrecasas, Harold Robinson, and Michael Nee for help while this note was in preparation and for comments on the manuscript.

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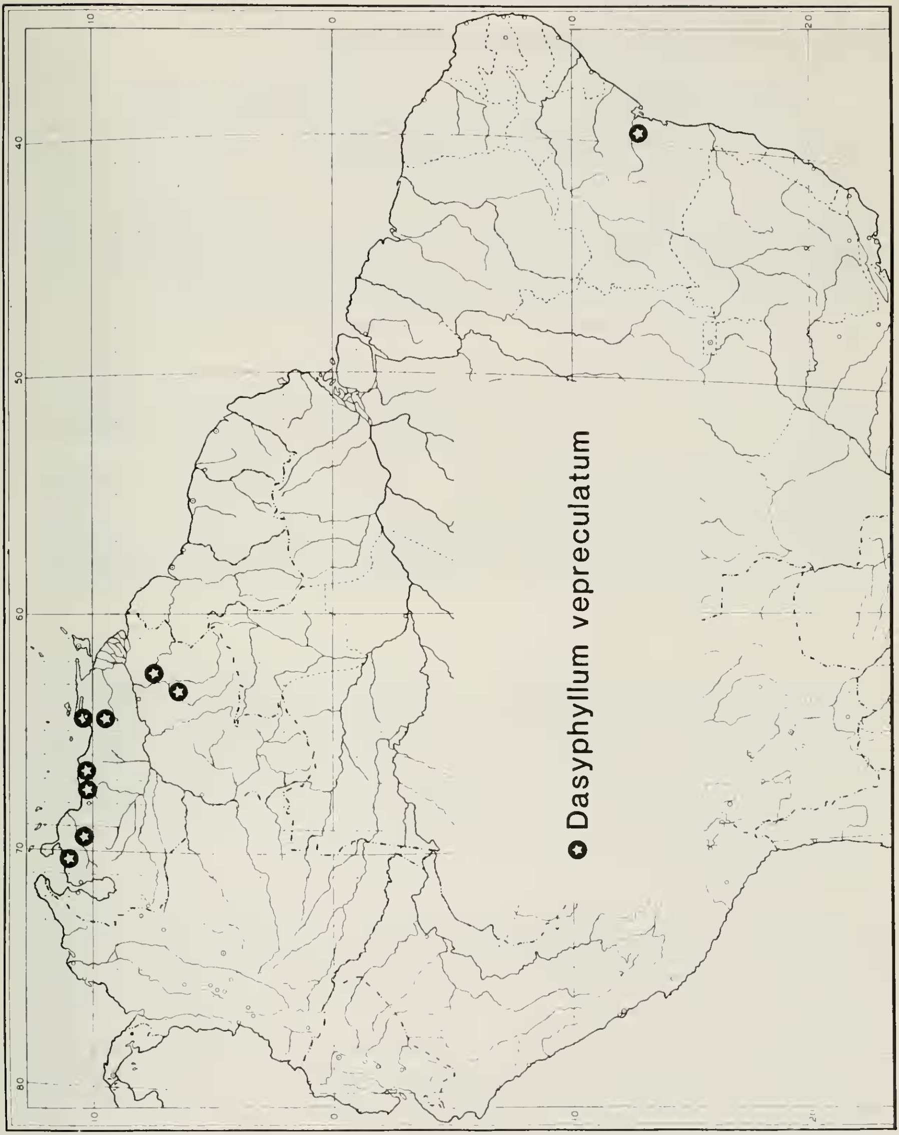

Fig. 1. Distribution of *Dasyphyllum vepreculatum.*